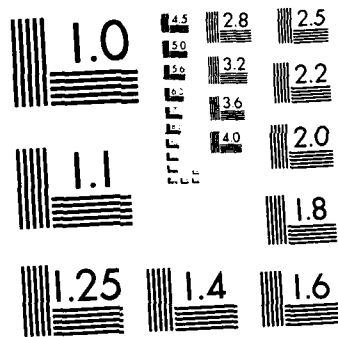


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SEARCHING FOR THE STRONGER FORM OF WAR AT THE
OPERATIONAL LEVEL IN THE 20TH CENTURY:
THE DEFENSE OR THE OFFENSE

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BY

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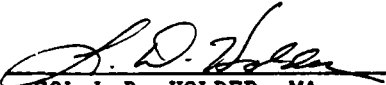
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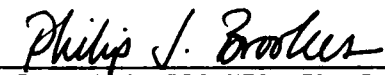
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ABSTRACT

Searching for the stronger form of war at the Operational Level in the 20th Century: The Defense or the Offense, by Major Oliver J. Moss III, USAF, 39 pages.

Perhaps one of the most controversial theories proposed by the 19th century military theorist and historian, Carl von Clausewitz, was the proposition that the defense, not the offense, was the stronger form of war. This is the second of two monographs addressing this theoretical position with the first monograph dealing with the issue at the tactical level. Clausewitz vehemently promoted the theory of the superiority of the defense because he felt it was being unjustly degraded, berated, and neglected by misguided, offensive-minded militarists. In Book Six he offered various factors which he felt contributed the most to the outcome of any battle. Six factors were identified with three being common, though of varying value, to the tactical and operational (strategic) levels of war, while the last three were applicable only to the operational level of war. As previously stated in the first monograph the purpose of this study was not to redefine, manipulate, or submit any new criteria to determine which form of war is the stronger. Rather to use the model developed by Clausewitz and apply it to two examples of 20th century warfare at the operational level.

The study confirmed that terrain, surprise, concentric attack, moral support, fortifications, and popular support certainly are essential factors in determining the outcome of a battle. The study also confirmed, however, that these and other factors (such as time and initiative) contributed directly to the outcome of a conflict proportional to the manner in which they were employed. Poorly utilized terrain resulted in the terrain contributing more to losing a conflict than winning it. So it is the defender's preparation, his use or misuse of these factor's which insures the success or failure of an operation. Defense is still inherently the stronger form of war at the operational level.

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SUPERIORITY OF THE DEFENSE

INTRODUCTION

'A riddle inside a mystery wrapped in an enigma' is the phrase originated by Winston Churchill to describe the Soviet Union. The phrase would have been as apropos for a superficial description of Carl von Clausewitz. Perhaps no other military theorist in history has been so quoted and criticized, yet so little read and understood. From Moltke to Foch, from Jomini to Liddell Hart, Clausewitz's book On War has been both the source of inspiration and the focal point for misinterpretation and vehement criticism. Perhaps no one theory of his has been so misrepresented as his proposition the defense is the stronger form of war over the offense. The debate over this particular postulation has continued since On War was first published with a number of linguistic maneuvers by proximity used to address the topic.

This paper will endeavor to explore the validity of Clausewitz's proposition as it may pertain to modern warfare at the operational level. This is the second monograph of two dealing with the defense/offense issue. The first monograph addressed the topic from the tactical perspective. Though the basic proposition remains the same for both levels of war, Clausewitz recognized there were different levels with various elements being peculiar in their applicability to each level. Examining the similarities and differences at the tactical and operational levels of war on which form, the offense or defense, is stronger will only be a portion of this paper.⁽¹⁾ The methodology will be to: Examine why Clausewitz felt the proposition was necessary; clarify his definition of offense and defense; examine those elements he felt intrinsic to the defense; relate the operational level of war to Clausewitz's tactical and strategic levels; and finally, apply these ruminations to two modern battles to determine if the defensive form of war is still the stronger form at the operational level in modern warfare.

In order to validate or contradict Clausewitz's theory in favor of the defense the direction to the issue should parallel his own

approach. As stated in the first monograph this paper will not attempt to

reconcile, rewrite, create or skip Clausewitzian theory concerning the defense but will apply Clausewitzian standards to two conflicts of the 20th century. Clausewitz felt that, as Raymond Aron wrote,

...Other military writers did not consider the classical opposition of defense-attack or the intrinsic force of each in the light of a series of conceptual pairs: keeping-taking; gaining time-losing time; repelling-advancing; political defense-military attack; strategic defense-tactical attack.⁽²⁾

He was intent on re-examining the entire approach to military history and the theories pertaining to the development of military thought on war. He felt too often the methodology applied to past battles and wars was flawed with the authors attempting to promote personal opinions or pet theories.⁽³⁾ He strove to abrogate the ideas of Jomini and others who attempted to reduce war to laws or formulas which could be considered constant. As Peter Paret stated in Makers of Modern Military Strategy, "To devise effective strategic schemes and tactical measures mattered far less to him than to identify the permanent elements of war and come to understand how they function."⁽⁴⁾ Raymond Aron wrote:

The purpose of Clausewitz can be easily seen if you are prepared to read him carefully...he sought to formulate a conceptual system, a theory (in the sense that we speak of economic theory today) which enables the concept of war (or real wars) to be thought out with lucidity.

That lucidity sought to have historians and theorists include in their work the importance of "Fog" and "Friction" as well as the moral domain as they affect the battlefield in the arena of war.

Clausewitz feared the study of the defense had been approached with poor methodology, questionable analytical procedures, and lack of clear empirical evidence.⁽⁵⁾ He went to great lengths to voice his praise in favor of the defense with his Book Six, of On War, being the most extensive portion of his epic work. Bernard Brodie in his analysis of On War presented the question and then provided the answers as to why Clausewitz made such a big deal on the subject of the defense.⁽⁶⁾ Brodie felt Clausewitz wanted to provide the emphasis and an eloquence to his position since he believed other authors had "built up a veritable mystique of the offensive, to which they attributed every conceivable advantage including lower casualties."⁽⁷⁾ Of course, Clausewitz accepted the importance of the offense and realized the necessity for the defense to go over to the attack, but Brodie wrote Clausewitz stressed the defense so avidly because he didn't want it "to be despised."⁽⁸⁾

Clausewitz sought to gain respect for the defense by conducting a thorough analysis of the subject which he felt required accurate empirical data and a constant focus on purpose, aim, and means. So to promote a better understanding of the defense he preached the benefits of direct observation and the use of history, experience, and logic.⁽⁹⁾ To begin his proposition Clausewitz offered a description of the defense. He said awaiting the blow was its characteristic feature, the only test which distinguished it from the offense, and the parrying of a blow its basic concept. He insisted waiting was not only the main feature of the defense but also its chief advantage. Any time wasted; any delay in the action; any hesitation on the part of the attacker, he was adamant would accrue benefits to the defender. These benefits would materialize in time to prepare positions, time to mobilize forces, time for the attacker to contemplate the significance of his opponent, so therefore, time for the attackers' resolve to diminish. Waiting is the fundamental feature of defensive warfare and one of two distinct parts. The other part of the defense is, as stated before, the parrying of the blow or action. Without this part, or characteristic, there was no war⁽¹⁰⁾ and it is this characteristic which so intrigued Clausewitz. For he envisioned this parrying of a blow not as a mere act of self-defense but an action with the intent to weaken the attacker. Thus allowing the defender the opportunity to obtain a more advantageous position or balance of forces.

Once that position or more favorable balance of forces was obtained it was incumbent on the defender, to transition to a counterattack which Clausewitz considered an essential feature of the defense.⁽¹¹⁾ At the beginning of Book Six Clausewitz wrote the defense was the stronger form of war with the passive purpose (to preserve or maintain the status quo), while the offense was the weaker form but with the positive purpose (conquest).⁽¹²⁾ He considered the offense a 'homogeneous whole'; a form complete unto itself. It did not have to be complimented by defense.⁽¹³⁾ An offense action could achieve its purpose of victory without ever having to take up a defensive posture. But the defense, the form consisting of two parts (waiting and parrying), only reached its ultimate goal (victory) by unleashing its 'flashing sword of vengeance' in a sudden and powerful transition to the offense.⁽¹⁴⁾ It is that transition to the counterattack which Aron and Brodie felt was overlooked

by those who criticized Clausewitz for his position favoring the defense. It was also misread or totally overlooked by admirers like Moltke and Foch who looked upon him as merely a proponent of a massive offensive approach.

Having dealt with Clausewitz's basic definitions of the offense and the defense it is necessary to examine the main factors interrelated between them which he felt were responsible for facilitating success above the tactical level of war. Those factors were:

1. Advantages of Terrain
2. Surprise
3. Concentric Attack
4. The Strengthening of the Theater of Operations by Fortresses and Other Means
5. Popular Support
6. The Exploitation of Moral Factors

Clausewitz believed the tactical level of war had only the first three of these factors (terrain, surprise, concentric attack) applicable to it. While all six of the factors were considered applicable to the operational or strategic levels of war. A brief synopsis of his opinion on each of these factors follows:

Terrain: One of the characteristics of an offensive action is the invasion of another's territory. This very action is one of the main reasons Clausewitz felt the offense was the weaker form of war. Because that invasion of territory comes into direct conflict with what Clausewitz felt was one of the greatest advantages of the defense -- Terrain. As he noted, "beati sunt possidentes" or "the advantage lies with him who has control" -- and Clausewitz identifies a number of advantages controlling the terrain gives to the defender. He normally has the advantage of deploying his troops in prepared positions in the field.⁽¹⁸⁾ He has the occasion to take advantage of obstacles provided by the terrain such as mountains, marshy streams, steep slopes or the opportunity to enhance his defense by constructing obstacles. If chosen well, a defensive position allows the defender to monitor all avenues of approach into his theater; to conceal his forces, thereby concealing his intentions from the attacker; to gain the advantage of interior lines of communications; and, depending on the size of the defended area to Garner, additional strength

through the depth it presents, the natural resources it possesses, the industry located on it and the people who inhabit it. Clausewitz devotes several chapters in Book Six to the major natural and man-made obstacles which benefit a defense such as mountains, rivers, swamps, forests, and fortified positions. Several of these will be discussed further during the analysis of the two modern conflicts.

Surprise: This factor Clausewitz described as 'The most powerful medium in the art of war'⁽¹⁶⁾ and closely associated it with initiative. Since the attacker normally has the advantage of initiative⁽¹⁷⁾ he stated the offense is favored with a small portion of the advantage of surprise. But the larger portion of the advantage of surprise he gave to the defender. It is the defender who utilizes his terrain to conceal his disposition of forces to surprise the attacker with a series of well directed counterattacks. These concealed positions allow the counterattack to attain local superiority though overall they may suffer strategic numerical inferiority. This element was considered more important at the strategic level than at the tactical level. Initiative and surprise accomplished at the tactical level, though it may result in the winning of a battle, seldom extends to a major victory.⁽¹⁸⁾ It was only on the larger strategic scale that Clausewitz felt the advantage of surprise paid its highest dividends. Since at that level a major victory, by the offense or the defense, could culminate in the total winning of the war. Michael Howard in Clausewitz and Modern Strategy wrote, '...Clausewitz was also convinced that on the tactical level the defender [over the attacker] could make better use of the element of surprise.'⁽¹⁹⁾ so in a campaign in a theater of operations, regardless of the level, Clausewitz gave the greatest portion of the critical element of surprise to the defender.

Before leaving the topic of surprise one issue needs to be addressed. An old saying goes 'A battle accepted is regarded as already half lost.'⁽²⁰⁾ Clausewitz disagreed with this view which cast doubt upon the survivability of the defense and addressed the subject specifically in Chapter Two of Book Six. He believed a defender in concealed positions with the ability to observe all enemy movements into his area could surprise and defeat the enemy with his counterattacks. So the 'battle accepted' was accepted on the defender's chosen field of battle and on his

terms. Thus the battle was not already half lost by the defense -- but instead half won.

Concentric Attack: This is another factor Clausewitz determined was pertinent to both the tactical and strategic levels of war, but appeared more effective at the tactical level. At the tactical level Clausewitz said it was easier for the attacker to surround the defender, but easier for the defender to assault segments of the attacker's line because he was better placed to spring surprises in strength and direction.⁽²¹⁾ At the strategic level the greater distances involved made it more difficult to surround the defender.⁽²²⁾ According to Clausewitz the attacker just can't deploy in sufficient depth -- but when the attacker assumes a defensive position the original defender could attack the invader's weakening LOCs.⁽²³⁾ At the tactical level the effects of cross-fire from the converging forces increased while at the strategic level the effects are eliminated 'since one cannot fire from one end of a theater of operations to the other.'

Because of the greater areas involved in strategy, the effectiveness on interior, and therefore shorter lines is accentuated and forms an important counterbalance against concentric attacks.

Clausewitz in his typical thesis/antithesis approach to a topic asserted the real advantage to the convergent attack was a common destination. Then, referring to strategy, stated it may be a definite disadvantage in that allies forced to attack a common enemy from different sides can never attack with a united force. Finally, in Chapter Four he discussed the 'Convergence of Attack and Divergence of Defense' and concluded the defender had advantages which are difficult to dismiss. The defender: has his troops operating closer together from interior lines. This multiplies strength until the attacker dares not expose himself unless greatly superior; and once the defender starts to maneuver, concentration and interior lines are more enhanced.⁽²⁴⁾ The ultimate point was that in strategy the advantage of interior lines increases with distances. More time is saved in longer marches and there are more opportunities to conceal movements from the enemy. Clausewitz seemed to prove the benefits of concentric attack, initiated by the offensive (the weaker form), were negated by the divergent attack utilized by the defense (the stronger form).

Strengthening Theater of Operations by Fortresses: This is the first

factor not considered at the tactical level but at the strategic level by Clausewitz. He considered this element a natural benefit to the defender. It represented a key role in the defender's overall strategy while the attacker was cut off from his fortresses when he left his own theater of operations. Once again the longer the march the more he was weakened, while the defender was falling back to his fortresses for supplies, reinforcements, and security.⁽²⁵⁾ The effects of a fortress were considered both active and passive. Passive in the protection it gave to everything in it; active in its ability to influence the countryside beyond the range of its artillery. In his analysis Brodie felt of all the chapters the one pertaining to fortresses was perhaps the least dated and fortresses, even up into the 20th century, had fulfilled their missions. He wrote the majority of the criticism leveled at fortresses through history were unfounded and it has just been a matter too much has been expected of fortifications.

One would tend to expect too much of fortifications if he examined the list compiled by Clausewitz. It identified various aspects on how fortifications helped the defender. He wrote that they provided: secure depots; real barriers; points of support; staging posts; refuge for weak or defeated troops; a shield against attack; protection for extensive camps; focal point for general insurrection; and others. Obviously an attacker was giving up a substantial element of support and the defender was gaining a considerable amount of support.⁽²⁶⁾ Brodie points out the role of fortifications in modern warfare can still be extensive.

Popular Support: This factor Clausewitz deemed usually applicable only to the defender and it may not even apply to every case in the defense (a defensive campaign conducted in enemy territory for example). The effectiveness of the militia and the arming of the population are two of the primary characteristics of this element. Also, he emphasizes, with popular support "every kind of friction is reduced, and every source of supply is nearer and more abundant."⁽²⁷⁾

His emphasis on the importance of the population could be attributed to his witnessing the rise of the people's involvement in the Napoleonic wars and in Spain.⁽²⁸⁾ He considered popular uprisings a phenomenon of the nineteenth century and "simply another means of war."

It is, in fact, a broadening and intensification of the fermentation process known as war. The system of requisitioning, and the enormous growth of armies resulting from it and from universal conscription, the employment of militia -- all of these run in the same direction when viewed from the standpoint of the older, narrower military system, and that also leads to the calling out of the home guard and arming the people.⁽²²⁾

Chapter Twenty Six of Book Six was devoted to the people in arms. Brodie wrote Clausewitz was not interested in the fears others were expressing about partisan uprisings as he was 'in its military value.' Clausewitz listed five conditions which were necessary for a general uprising in defense to be effective and described several situations on how a people in arms could best be utilized. He stressed using the people in the form of an uprising should have a nebulous quality that makes its very nature evasive so no direct action can be launched against it. He felt a militia type force should receive support from the commander of the regular forces but the support should not include larger regular units (would change the very character of the militia); nor should the militia be absorbed into the army for the same reason. A militia was not meant to engage a main force but 'to nibble at the shell and around the edges.' He further delineated the character of this type of a force by writing:

It does not matter much if a body of insurgents is defeated and dispersed -- that is what it is for -- but it should not be allowed to go to pieces through too many being killed, wounded, and taken prisoner: such defeats would dampen its ardor.

But as Brodie points out in his analysis, Clausewitz may have been just groping for the truth because this type of war was new and little understood. As we shall see the role of the militia has changed considerably since Clausewitzian times.

However, Clausewitz did understand one key aspect of popular support and that was regardless of the fortunes a country may be experiencing in a war, the people offer a source of 'internal strength.' He felt no matter how overwhelmed a state may be, it could maintain its very soul by mobilizing the people as a last effort. If it fails to do that, '...its soul is dead'.

Exploitation of Moral Forces: Though Clausewitz spends relatively little space describing this element in Book Six it is a theme that runs throughout On War. He stated moral forces permeate war itself. Moral forces are found in each element of his trinity: the government; the people; the army and its leadership. These forces are used to invigorate

the troops and inspire them in the quest to repel the invader. Though Clausewitz stated moral factors are found in the attack as well as in the defense he felt factors which may benefit the attacker (such as panic and confusion in the enemy's ranks when they were surrounded or cut off) would not emerge until late in an engagement, thus, having little bearing on it's course. The army on the offense received some benefit of moral forces knowing it had the initiative. However, this could be offset by an army which had confidence in it's commander and it's record of victories.⁽³⁰⁾

Having compiled and analyzed the factors Clausewitz determined were responsible for the success or effectiveness of the offense and defense an analytical tool is now in place. This tool will assist in determining whether or not the defense can still be the stronger form of war, in modern warfare, at the operational level. But before that historical review takes place one last theoretical problem must be addressed. How can we relate a Clausewitzian proposition to an operational level when Clausewitz did not specifically address the existence of an operational level of war?

Clausewitz recognized only two levels of war: The strategic and the tactical. He defined strategy as 'The use of the engagement for the object of the war,' and tactics as 'the use of armed forces in the engagement.'⁽³¹⁾ So how do we today legitimize attempts at placing Clausewitzian definitions and theories on a level of war he did not specifically address? Lieutenant Colonel Gertmann Sude, of the Federal Republic of Germany's Army analyzed the problem this way:

Clausewitz had some problems with delineating between the strategic and tactical levels in On War. In Chapter One, Book Two, he considers individual acts which can belong to strategy or tactics, because of space and time considerations. In Chapter 13, Book Three, he expresses the difficulty of determining whether a reserve corps is a strategic or tactical-level force. In Chapter 13, Book Five, he cannot precisely decide if the preparation and provisioning of living quarters is a matter of strategy or tactics. In Chapter One, Book Six, he introduces the term 'Campaign' at the strategic level because he needs an operation between engagement and war.

One may argue that Clausewitz had reached the conclusion that there should be a third military level. Some issues do not completely fit on the strategic or tactical level, but a new level was never expressly defined.⁽³²⁾

It does appear Clausewitz, while writing On War, was close to defining a third level of war. His space/time relationship was expressed in three levels: position/battle; theater of operations/campaign;

country/war.⁽³³⁾ As he states in Chapter One, Book Six and pointed out by Sude:

At the strategic level the campaign replaces the engagement and the theater of operations takes the place of the position. At the next stage, the war as a whole replaces the campaign, and the whole country the theater of operations.⁽³⁴⁾

He has, by association or deductive reasoning, merely suggested the 'next state' is another level of strategy. Throughout On War Clausewitz uses the noun 'operations' when referring to a campaign or the utilization of time/space relationships to accomplish strategic purposes. This use of the term alone is extremely close to a modern definition used in FM 101-5-1 which reads:

"A military action or the carrying out of a strategic, tactical, service, training, or administrative military mission; the process of carrying on combat, including movement, supply, attack, defense, and maneuvers needed to gain the objectives of any battle or campaign."⁽³⁵⁾

In a theoretical paper James J. Schneider traces the evolution of the term operational art. He concludes three reasons were responsible for the creation of the term and therefore, subsequently, the creation of the level of war: demographics; geopolitics; and technology. These factors combined to expand the battlefield and take away the capability of one man to control all the various elements.⁽³⁶⁾ The campaign to obtain the strategic objective was no longer decided by one decisive battle but by several decisive battles against several different armies which had to be coordinated in the execution. This evolution, Schneider explains, had its classical origin during the Napoleonic Wars. Since Clausewitz used Napoleonic Warfare as the primary basis for the inspiration of his work there should be little doubt his possible searching for a third level of war could have materialized from examining the French campaigns conducted in Italy, Russia, and the Iberian Peninsula.

With the 'classical' definition now traced back to Napoleonic time, and evidence of association identified within On War, the Clausewitzian proposition can be compared to examples of modern warfare to determine if the defense can still be the stronger form of war at the operational level. By examining the operational implications of terrain, surprise, concentric attack, strengthening the theater of operations through

fortresses, popular support, and the exploitation of moral forces in relation to the German attack on France in 1940 and the Egyptian attack across the Suez in 1973 we can evaluate Clausewitz's proposition on the modern battlefield.

The German advance in '40 and the Egyptian assault in '73 were chosen for the unique stature they maintain in world history. Both attacks changed the look of warfare for their time and saw the major world powers scramble to adjust their military doctrine, training, and equipment to meet the changes. The German attack initiated Europe's most modern armies to the effects of mobile warfare at a lightning pace and a combined arms approach to war known as 'Blitzkrieg'. The Egyptian attack proved to a skeptic world that strategic surprise could still be achieved against a highly modern army and that new phrases like 'SAM Umbrella' should be included in any new operational terms dictionary.

France 1940

The spring of 1940 saw Hitler and Nazi Germany sitting on a lofty perch which had been constructed with a military victory in Poland and a series of diplomatic, and political coups. Beginning in 1936 with the German military reoccupation of the Rhineland, Hitler and begun an aggressive policy of attempting to unify all the Germanic speaking people of Europe under a single state. This expansion materialized outside post-World War I German borders for the first time in March of 1938 when Germany rolled tanks and troops into Austria. Though France and Britain lodged vehement protests against the action they did little else. Hitler continued with his expansionistic endeavors by declaring the Sudeten area of Czechoslovakian should be annexed to Germany. In September of the same year, in order to avoid possible armed conflict, France and Britain signed over the Sudeten area to Hitler's Germany without the Czechoslovakia government even attending the conference. With Hitler's promise his territorial desires had been sedated the Allies believed they had achieved 'peace in our time'. But in March of 1939 German Troops marched into Prague; France and Britain did nothing but sign a defense agreement with Poland; and when Hitler directed the invasion of Poland, with the consent of Russia, France and Britain declared war.

Though war had been declared, the winter of '39 up to the spring of 1940 saw little action between the combatants. Germany continued to

expand her forces and implement doctrinal changes learned from her experiences in Poland. France and Britain, though they also concentrated on expanding their armed forces, did little to learn from the employment of weapons and maneuver observed in Poland. In fact, France saw little need to re-evaluate her defensive doctrine or military composition. Since WWI, and the disastrous results of 'the offense at all costs', France had attempted to develop a military doctrine and national posture which could best meet her unique territorial circumstances. The doctrine was validated utilizing an analytical approach to historical evidence. After continual wavering between whether to base the construction of its military on an offensive or defensive doctrine France decided on the defensive.

As mentioned previously, adopting a defensive strategy was predicated on certain theoretical premises and observed facts. First, the French military had done a complete reversal on their thoughts on the effectiveness of new weaponry. Prior to the outbreak of hostilities in WWII the French believed the new weapons strengthened the defense with their destructive power.⁽³⁷⁾ The professional military schools still recognized the importance of a balanced defense which included effective counterattacks, but emphasized methodical battle and firepower with room for offensive action to deliver the decisive blow.⁽³⁸⁾ The desire to conduct a methodical battle meant control of all assets had to be centralized which left little room for lower command initiative. Second, since the revolution in the eighteenth century the French military had been based on the nation-at-arms concept. A small, professional, standing army protected the frontiers in peacetime and was enlarged by the callup of reserves during an invasion of the Republic. The reserves who received their training due to the national policy of a two-year conscription⁽³⁹⁾ were envisioned as being suited mostly for a defense action. And though France had one of the largest populations in Europe 'it could effectively fight a war against a major power only after calling the nation-to-arms, and it could not fight a limited war without placing in risk its entire mobilization system and its capacity to fight a total war'.⁽⁴⁰⁾ The job of the standing army was to slow an invader's advance until the reserves could be called up to action.⁽⁴¹⁾

Third, the small size of the standing army and the time needed to call

up the reserves combined with territorial considerations to result in a perceived need to construct a line of fortifications on her borders. The fortifications⁽⁴²⁾ were seen to fulfill four objectives: 1. Allow economy-of-force operations for a small standing army; 2. Give time for reserve callup; 3. Protection of majority of population, industries, and natural resources which were located in the vulnerable frontier along Germany's border⁽⁴³⁾; and 4. The government and military never wanted to fight a war on French soil again. The line of fortifications stretched from Switzerland to France's northeastern frontier, and though consideration was given to continuing the line to the English Channel, this idea was seen as conveying to her northern allies a policy of isolation so was dropped. This series of fortifications became known as the Maginot Line and developed in France a sense of security which would permeate the entire French society.

Where the Maginot Line ended the Dyle-Breda Plan began. This plan was devised to allow the French to march into Belgium to meet a German advance based on a suspected implementation on a variation to the Schleiffen Plan of WWI. The Dyle-Breda Plan was devised by General Maurice Gamelin, Commander of the French Military Forces, and was predicated on Belgian approval to enter their country and the French desire to fight the war as far from French soil as possible. The plan left a skeleton force guarding the Ardennes corridor which was described by Marshal Philippe Petain as 'impenetrable', but he added, which was ignored by the powers that be, 'provided we make some special dispositions'.

Though Hitler wanted to begin the invasion in October of 1939 weather, troop dispositions, and the recommendation of his military commanders convinced him to delay the attack until it's ultimate execution in May of 1940. 'Plan Yellow', conceived by General Erich von Manstein at the time an officer on the staff of Field Marshal Gerd von Rundstedt, was launched on 10 May. By surprising the French and blowing through the Ardennes gap, they were able to isolate the allies in the north with a drive to the channel. In six weeks the French signed an armistice. (Map #1)

After the Germans broke through the Ardennes the first part of the war was over and the second part, the race to the channel and the battle for France, began. It is the first part of the war which is of interest to this study and which will be used. Also though Britain, Holland, and

Belgium took part in this confrontation it was the interaction between France and Germany which was at the center of the final outcome. So unless it is crucial to prove a point only the French and German action will be analyzed.

Terrain: This is the factor which Clausewitz felt would always be of benefit to the defender and regardless of the changes in warfare would insure superiority to the defense. Of course that proposition was predicated on the assumption the defender would make effective use of the terrain. The German invasion of France has to occupy a position of notariety in history as one of the worst examples of a defender misusing the advantage of terrain. though the French recognized the effectiveness the terrain in the Ardennes provided in delaying or even denying an enemies penetration through the area they failed to capitalize on it. For centuries the area had been considered a major obstacle to any force marching through it but impenetrable only if combined with man-made obstacles.⁽⁴⁴⁾ The Germans recognized the risks involved with attacking through the Ardennes, and were extremely apprehensive even when they reached the Meuse River, but gambled that their enemies would overlook this vulnerability and leave the German path unobstructed.

When the Germans began their invasion the Belgians had barricaded all the roads and forest tracks. They had also blown huge craters in the main roads but for some inexplicable reason they had pulled back their forces instead of engaging the Germans. Thus the Belgians left the obstacles undefended.⁽⁴⁵⁾ The Germans merely pushed most obstacles aside and moved on. The French believed if the German main effort did come through the Ardennes it would take up to nine days. Within that time more French reinforcements could be brought to the area. Unfortunately, they underestimated the German capability by six days. On 13 May the Germans were on the Meuse.

Much of the fault for not defending the area more thoroughly lay with the Belgians. The French expected them to construct obstacles, man defensive positions,⁽⁴⁶⁾ and act as a covering force for the French forces along the Meuse. Still, when the Belgians withdrew the French should have retaken their positions. But lack of communications between the Allies and the the French preconception of a northern attack resulted in the Germans marching through the difficult terrain virtually unopposed.

Other attributes the terrain gives to the defender are cover and concealment; ability to observe the enemy approaching your position; and interior lines of communications. In this example the attacker, not the defender, made optimum use of cover and concealment. With the help of aircraft providing cover the German deployment through the forest went unobserved. Two RAF reconnaissance flights flew over the area the day before the battle and reported nothing unusual. The French on the other hand did little to conceal their position -- so when the Germans reached the banks of the Meuse they were able to quickly identify the French positions and take them out. French reinforcements brought into the area had little time to dig themselves into defensive positions so were easy targets for the Germans. (47)

Also, Clausewitz as well as Jomini preached the importance of interior lines and the benefits to resupply, reinforcing, and communicating they give their possessor. French disorganization, German interdiction efforts, and the French inability to adjust to this surprise attack resulted in the French receiving no visible benefit of interior lines.

Finally, even though the Germans were able to march unopposed and unseen through the Ardennes the French positions at Sedan were on the substantial heights over looking the German forces down on the Meuse. These positions alone, if prepared well, and ranged for the artillery, could have wrought havoc on the Germans below. As a matter of fact the initial salvos of those guns 'rendered initial German movements practically impossible' though the fire was sporadic and not outstandingly accurate. (48) However, once again due to poor cover and concealment these positions were destroyed one at a time by the attacking Germans.

So terrain, which Clausewitz perceived as being the very heart of the defense, was practically negated as an asset to the French due to poor operational planning and employment.

Surprise: The invasion of France in 1940 ranks as one of most effective examples of the use of surprise and deception in history. First, because the ultimate result was the collapse of one of the world's biggest armies in a mere six weeks; second, because the very size of the effort is a testament to the abilities of the German General Staff (and Hitler) in keeping the action secret; and third, because of the complete

incompetence of the French Government and its military in seeing the attack coming.

When the final operational plan was approved Hitler had ordered that secrecy and surprise should be of the utmost concern. The Germans decided to use the fears and assumptions the French had created concerning a possible attack and incorporate them into 'Plan Yellow'. Army Group 'B' would attack in the north through the Gembloux Gap to act like 'a matador's cloak' and draw the French deeper into Belgium. The attack was to be violent, accompanied by a strong air attack, and with no possibility of disengaging the enemy. This would confirm known French estimates the main attack would be a variant of the WWI Schlieffen Plan.⁽⁴⁸⁾ The main attack by Army Group 'A' would then strike through the Ardennes into the lightly held positions around Sedan and cut-off the Allied forces which had deployed north to meet the secondary German attack. To insure the viability of trespassing through the Ardennes the Germans had sent observers through the area dressed as tourists days before the attack. Unsuspecting Belgium frontier guards allowed 'an unprecedented amount of bicyclists' into their country.⁽⁵⁰⁾

Clausewitz said surprise was one of the factors which partially benefits the attacker and the Germans set out to optimize the effects of surprise. Prior to the offensive even commanders of units in the van of attack were kept ignorant of its timing until the last possible minute⁽⁵¹⁾. While pilots in the Luftwaffe were called to briefings with only 15 minutes notice.⁽⁵²⁾ They knew the French did not expect an attack through that avenue of approach; they knew the dense forests would conceal their approach from the air; and though the Luftwaffe gave substantial effort to covering the advance to insure its concealment from allied air it was not allowed to attack too far forward of the ground troops. This further disguised the main effort until it was on the Meuse. Well into the invasion, Germany continued with her deception campaign, a key ingredient of surprise, by leaking information that the main attack would be from Army Group 'C' which was poised opposite the Maginot Line.⁽⁵³⁾ This proved especially effective since the French withheld their operational reserves behind the Maginot Line waiting for what they thought would be the main attack. The deception in the north and to the east were exceptional -- with Gamelin not recognizing the main

effort had been through the Ardennes until the Germans started their advance to the channel. By then it was too late.

Though credit belongs to the Germans in creating surprise some credit must be given to the French for making it possible. One major area of surprise during the attack was the combined arms approach to the battle of Blitzkrieg. No modern army had ever as effectively employed the elements of air, ground maneuver units, and self-propelled guns to such a high degree. But this should have not surprised the French. They had seen the development of the approach in Spain; read published articles on its capabilities; and watched its development further nurtured in Poland. Its employment and effectiveness should have come as no surprise.

Should they have been so surprised when the attack kicked off on the 10th of May? In January the Mechelen Incident warned them of Germany's impending desires; the attack on Poland showed them how sudden the attack could occur; Charles de Gaulle's admonitions foretold of German intentions; and just before the invasion began the Swiss told the French of intercepted messages the attack would begin between 10-12 May. So why, with all those indications, were the French surprised? One answer is French assumptions! The French assumed the Ardennes area was impassable; they assumed the Germans would attempt a variation on the Schlieffen Plan which came so close to success in WWI; they assumed the Germans would have to halt to bring up their fire support during the advance; and they assumed their doctrine, based on an analytical study of historical evidence, was correct in advocating a defensive approach to war. All the assumptions proved invalid.⁽⁵⁴⁾

The results of false French assumptions and efficient German use of surprise were compelling. Allied aircraft were found lined up in rows on their airfields and Dutch troops asleep in their beds.⁽⁵⁵⁾ Gamelin directed the use of limited air assets against the attack in the north while the attack through the Ardennes achieved uncontested air superiority. Much needed reserves were either pushed to the north or held in waiting behind the Maginot Line in response to the deception campaign. And what of Clausewitz's assertions it is the defender who can surprise the attacker with the direction and timing of his counterattacks? The only surprise the Germans received was the French didn't appear to launch any counterattacks with sufficient men, effort, or in a timely manner.

The effects of the element of surprise on this battle at the operational and strategic levels were crucial to the final outcome.

Concentric Attack: The true focus for the German attack, the central concept for the operational plan, was the isolation of the mass of Allied forces north of the Schwerpunkt through the Ardennes. The coordination of Army Groups 'A' and 'B's' attacks and the implementation of combined arms firepower proved too lethal for the French. The Germans had come to emphasize offense instead of defense by employing the mobility and mass of armored formation against enemy vulnerabilities. A French defeat was virtually unavoidable since 'The French strategy of rushing forward in Belgium was particularly vulnerable to the German attack through the Ardennes.'⁽⁵⁶⁾

Of course, Clausewitz devoted a chapter in Book Six on the relationship of the attacker's concentric attack compared to the defender's divergent attack and did not find the defender wanting. The counterattack launched from an advantage of interior lines was considered that ultimate 'sword of vengeance'. As described in Alistair Horne's book To Lose a Battle the French 'adhered to counterattack formula because French doctrine envisaged first the weakening of an attacker by the defender's fire, and then his destruction by a massive but tightly controlled 'battering' ram.'⁽⁵⁷⁾ This approach would have worked had the Germans adhered to WWI tactics and strategy but they had developed a new approach to war, one that avoided methodical battles and praised initiative. They sought out the control centers, the LOC's and targeted them with air and artillery. Since the French demanded tight control, and unlike the German commanders were far removed to the rear, strikes against their communications were doubly effective.

Due to the targeting of control centers the French counterattacks had their problems. Many times commanders planned localized ripostes and were unaware of the disposition of either the German or French troops. During the initial stage of the attack, 'the sluggishness and lack of punch with which these first ripostes were executed characterized almost all the French counterattacks subsequently carried out at various levels.'⁽⁵⁸⁾ Perhaps Allied air could have played a more substantial role as a means of counterattacking the Germans. Unfortunately, poor communications, lack of control, and poor coordination between the air and ground forces resulted

in air efforts being a total failure.⁽⁸⁸⁾ The French efforts in regards to divergent attack were not a glowing representation of how Clausewitz perceived the element to be utilized.

Strengthening A Theater of Operations by Fortresses or Other Means:

On his chapter on fortifications in Book Six Clausewitz pointed out due to the inherent static nature of fortifications the advantages they could convey were gained by the defender not the attacker. In May of 1940 it was the French who should have reaped any benefits obtained from this factor. The system of fortifications was not a new concept to the French. Fortifying frontiers was a French tradition. This influenced the construction of the Maginot Line, but worries over difficulties mobilizing quickly, of protecting resources, industries and population centers made the building of permanent fortifications along portions of the frontier even more necessary.⁽⁸⁹⁾ Doughty wrote:

The Maginot Line was not designed to facilitate the offensive maneuver of large units as initially envisaged by Marshalls Foch and Joffre. It was designed to protect the northeast, to canalize the Germans toward the northern frontier, and to permit the concentration and movement of large French forces into Belgium.⁽⁹¹⁾

The French built the Maginot Line to be impregnable and after construction was completed on the eastern frontier the German General Staff agreed that it was. They agreed that the line was too formidable for an assault, especially if there was any possible alternative strategy.⁽⁹²⁾ Of course that strategy was formalized in the operational 'Plan Yellow'. Interestingly, Clausewitz addressed the very issue of a fortification being too formidable. He predicted, as the French had planned and the Germans agreed, a fortification which appears impregnable may end up being bypassed by the attacker.

The Maginot Line accomplished what it was built to do. To cause the attacker to bypass it and attack in the north. Unfortunately, for the French the Germans attacked through an area that wasn't as well defended. The Maginot Line did not fail. Not one major fort in the complex fell to German assaults and they only surrendered after the armistice was signed. In one instance the Germans brought overwhelming infantry, artillery, and aerial fire support against a fortification at Haguenam but had no success and failed miserably against fortifications at Ferme and Michelsberg. The only German successes were achieved against lighter defenses.⁽⁹³⁾ The Italians achieved even less success but more losses in their attempts

to breach France's defenses in the south.

However, the fortifications in the north were less extensive. Any work accomplished to strengthen those defenses was only partially completed and suffered from poor terrain selection, poor construction, or lack of concealment. German units had little problem smashing through these defenses.

As Doughty stated in The Seeds of Disaster the Maginot Line complex⁽⁶⁴⁾ was not the reason for the failure of French operational forces in the Ardennes and other sectors. He felt any errors committed by the French were not due to a 'mental complex' based on an impregnable line but on strategic thought, operational command and tactical doctrine.⁽⁶⁵⁾ Also by the inflexibility of their doctrine which hampered them in responding to the revolutionary style of warfare launched by the Germans.

Popular Support: This factor Clausewitz said primarily meant the effectiveness of militia, and the arming of the population. But as Brodie noted in his commentary for On War and as already mentioned Clausewitz appeared a little uncertain how this factor impacted on the subject of war. With France and Germany in 1940 we find few examples of an armed populace but the definite existence of a policy based on the role of the citizen-soldier.⁽⁶⁶⁾

As with the use of fortifications to protect her frontiers, France had a history of using citizen-soldiers to fill her armies. In post WWI France, however, popular opinion was against a large standing army, large expenditures on the armed forces, and conscription policies of over one-year. Germany, at the same time, had the external constraints of a treaty placed on her which restricted the size of her military, yet, provided an atmosphere for the professional growth of the regular forces in her standing army. However, as the 1930's wore on French public opinion became acutely aware of the growing power and threat of Nazi Germany.

The French responded to the threat with an analysis of their security requirements. They constructed a national defense system predicated on the participation of the entire nation in a future struggle and hinging on the importance of the citizen-soldier.⁽⁶⁷⁾ On the average, every year the military budget was increased. The frontier fortification system was

strengthened, the one-year conscription was increased to two, and the French started to develop a dangerous sense of invulnerability. The 'levee en masse', an integral part of the French culture since 1793, added to this French feeling of safety and to the development of military doctrine.⁽⁶⁶⁾ A belief existed that, should the nation be invaded, a swell of popular support would rise up and throw the invader out of the country. The French saw themselves as 'only an army of defense'; based on a system of conscription rather than a regular army, so therefore, of little danger to her neighbors.⁽⁶⁷⁾ This defensive mindset influenced the military in such a manner that doctrine and training favored the anti-tank gun (ATG) over the tank. The ATG was less expensive and easier to learn for an army low on professional soldiers and high on reserves. And Germany? Well, Hitler after a series of diplomatic and military victories was at the height of popularity with the German people.⁽⁷⁰⁾

When the German operational plan kicked off both countries were experiencing a good degree of popular support. But the popular support in France suffered some political division and a little loss of morale as German victories in Poland and Norway materialized. The friction which Clausewitz stated should affect the attacker played a bigger role with the French as troops were slowed by a huge flux of refugees running to the French interior. As far as the development of partisan activity or popular uprising observed by Clausewitz in Spain, the speed of the German attack left little time for such activities to be organized.

It is difficult ultimately to separate the moral factor from popular support. But just as the morale of the country provided little advantage to the French effort the divided popular support given to the military in the pre-invasion years undermined the army's capabilities to meet an inspired, well-led German force.

Moral Forces: One observation summed up the situation:

No criticism of France's wavering allies can obscure this very painful truth. The strength and resolve of the allies may have been illusory; the final paralysis and helplessness of the French army were not.⁽⁷¹⁾

The moral domain which permeates every element of Clausewitz's trinity can be found in the Battle for France in 1940. Each moral element of the political, civilian, and military had a contributing effect on the fall of France. While Nazi Germany was being directed by a single political party

and a dominating political leader, France had been mired in political muck. Due to opposition party disagreements with the handling of foreign policy and over matters pertaining to the military at the outbreak of war the government was in the midst of dissolution. But the political involvement in the military was telling:

Their insistence on a short term of service, their denial of the need for larger numbers of officers and noncommissioned officer on active duty, and their refusal to increase the size of the forces compelled the military to seek simpler solutions and to rely on the correction of flagrant inadequacies only upon mobilization for war. The rough and unwieldy instrument they provided the military leaders severely constrained the practical alternatives for the development and fielding of a modern force.⁽⁷²⁾

So constant changing political leadership and political infighting had a definite effect on the military's handling of war at the operational level.

The moral domain among the people though less tangible could still be identified and it started with WWI. The French had the greatest number of casualties during the war and saw large areas of its countryside destroyed. The desire to stay out of war, or if war came, to stay off French soil was deepseeded. Both these desires were partially responsible for the ultimate decision to build the Maginot Line and the resultant fatal characteristic it instilled in the entire country of over confidence in the line's impregnability. As the German war machine rolled in Europe the German people strengthened their support of Hitler, while the French became more dissatisfied and fatalistic.⁽⁷³⁾ The penetration of the Ardennes and the cries of Fifth Column treachery were key reasons for the decline of morale in the people.

Since the political and civilian moral atmosphere was of questionable fiber at the outbreak of war the status of the military moral constitution should have been visible. Clausewitz stated the attacking army normally possesses the higher moral level since it receives inspiration knowing it is on the offensive. This was an accurate description of the German Army in May of 1940. High morale and a sense of invincibility was starting to infiltrate the ranks. The operational commanders, have since been recognized as some of history's best, and were noted for their leadership style characterized by their desire to be close to the battle. The morale of the French army was another matter.

The state of the French military's morale started at the top. In The

Seeds of Disaster Robert Doughty writes French leadership was being directed by staff officers and bureaucrats.

Had France's military leaders been less concerned with bureaucratic details and more concerned with the major issues of policy, strategy, and doctrine, they undoubtedly would have fared better in 1940.⁽⁷⁴⁾

But all soldiers weren't bureaucrats and doctrine didn't explain the collapse of the army. Guderian described the soldiers he came up against as 'flabby civilians...whose morale was not conspicuously high.' Most French historians would agree with the assessment, 'in general, resistance was feeble.'⁽⁷⁵⁾ Examples abound of units running away without engaging the enemy; of artillery left behind without being fired;⁽⁷⁶⁾ and of leaders ordering retreats of their units without being engaged. The French Air Force was described by Air Marshal Barrett as being full of 'apathy and defeatism.'⁽⁷⁷⁾ Certainly a sad testament to a nation and its army which in 1939 was considered by the German Staff as the 'best army in the world.' Certainly, the French achieved little advantage from any moral factors at the operational, or at any other level.

Sinai 1973

The Middle-East in October of 1973, and the Sinai Desert in particular, was a hot-bed of military and political activity between the areas two occupants Egypt and Israel. But this situation was nothing new. Since Israel had become a state by United Nations action in 1948 it had been to war with its Arab neighbors five times. Each war had seen Israel grow gradually stronger while the surrounding Arab nations became increasingly more hostile towards the fact of her very existence. The atmosphere in the beginning of October was especially strained due to the buildup of Egyptian military forces on the west bank of the Suez Canal and a corresponding buildup of Syrian forces opposite the Golan Heights on Israel's North-Eastern border. The buildups were being implemented in preparation for a Arab coalition attack meant to achieve limited objectives against the state of Israel.

Though the subsequent Yom Kippur War had two main theaters of operations it is the western arena, along the Suez Canal in the Sinai Desert, with which this monograph is concerned. There, the two bitter enemies, Egypt and Israel, waged a war which was to have far reaching consequences. The armored battles were the largest history had ever witnessed, larger than Kursk. The intricacies of the alliances involved

almost brought the United States and the Soviet Union toward a military confrontation. The entire war turned out to be proving grounds for new military weapons, tactics, and strategies pitting the technology and methods of the U.S. against those of the U.S.S.R. But the hostilities in 1973 didn't just appear like an apparition, rather, they came to a boiling point after simmering six years in the War of Attrition.

The War of Attrition began almost immediately after the Six Day War of 1967. The Six Day War had been catastrophic for the Arabs. With its victory assured after the cease fire truce was implemented, Israel had achieved a number of important gains. She proved her military superiority on the ground, on the sea, and in the air. Her air forces now dominated the skies as thoroughly as her ground forces controlled the land. Her frontiers were expanded in a manner, which for the first time, gave her easily defensible borders which added depth to her territory and therefore depth for her defenses. The Suez Canal and the Sinai Desert provided Israel with obstacles and positions of observation against any future Egyptian invasions. The new buffer area between the major Israeli population centers and her Arab neighbors provided Israel with a sense of security which was similar to that existing in France in 1940. As in France, that sense of security would lead to an unexpected attack from her worst enemy.

The significant benefits achieved by Israel after the Six Day War were only equaled in magnitude by the setbacks experienced by Egypt. For the second time in a little over ten years she suffered a humiliating defeat at the hands of her considerably smaller neighbor. Her prestige in the Arab world was tarnished and she had again lost the territory in the Sinai. The morale of the entire country was damaged but the morale in the Egyptian Army was at an all time low. In an attempt to repair some of the damage and go on to build his own power base Nasser began his 'War of Attrition' against Israel almost as soon as the ink was dry on the 1967 truce.

The Egyptian strategy of attrition had several goals. One goal was to weaken Israel by a number of limited attacks at selected targets within her borders. Though Israel always counterattacked with a significant increase in force Nasser felt a continuation of this policy would slowly sap Israel's strength and resolve. Another goal was to gain increased

military aid from the Soviet Union. While relative peace was being experienced Nasser wanted to train, equipment, and raise the overall quality of his military so that ultimately he could launch another war to destroy Israel. The Soviet Union backed the effort financial and her influence continued to increase in the area until actual aerial combat took place between Russian and Israeli pilots. Subsequent to the Soviet aid the Egyptian military became one of the largest and best equipped in the world.

Nasser had sought and achieved Soviet aid. He was viewed as one of the major leaders of the Arab world and by 1970 he had rebuilt his army's strength and somewhat it's tarnished reputation. But that same year he died and Anwar Sadat came to power. Sadat continued the policy of the 'Three Noes' begun by Nasser (no peace; no negotiation; no recognition); continued to strengthen his military; and though he expelled the Soviets from Egypt in 1972, continued to receive substantial Soviet military aid. This aid, among other things, resulted in Egypt having one of the most sophisticated and dense surface-to-air missile (SAM) defense systems in the world. Under Sadat's, the number of Egyptian exercises and military maneuvers increased, while the number of raids into Israeli territory and hostile actions on the canal significantly diminished.

With the apparent lessening of tensions along the Suez there were moves in the government and some pressure among the Israeli people to cut come of the military budget. One of the suggested budgetary cuts was on the manning of the Bar-Lev Line. Originally consisting of 35 forts heavily dug-in, each fortification held approximately 15 men and was reinforced by armored units located between the forts. As tensions eased some forts were blocked up, but as the situation worsened a number of the forts were being reopened. The Suez Canal, Bar-Lev Line, regular Israeli Army, and Sinai Desert were considered obstacles sufficient in stature to delay an attacking army long enough for the reserves to be mobilized and moved to forward positions. The Israeli government and military believed they would also have sufficient intelligence warning to strengthen their defense positions and to call up the reserves before an attack could actually be launched against their frontiers. On 6 October 1973 at 1430 hours the Egyptians launched an attack across the canal. The Israeli's had become victims of a surprise attack which they felt could not

happen. (Map #2)

The Egyptian operation was part of a coordinated attack supported by a Syrian assault on the Golan Heights. No mention of the Syrian effort will be discussed unless it is determined to be of value to the analysis of the Suez/Sinai Theater of Operations.

Terrain: Two dominant terrain features played large roles in the war: the Suez Canal and the Sinai Desert. The former played a considerable role throughout the war in the operational plans of both sides, while the latter tended to have more of a passive influence. The Canal was considered by the Egyptians as their first major obstacle.⁽⁷⁸⁾ The Israeli's saw it, along with the Bar-Lev Line, as their first line of defense. The Sinai on the other hand presented difficulties, or opportunities, because of its width. Egypt could not range the population centers of Israel except with Soviet SCUD missiles. Israel predicated its defense policies around the fact that the width of the desert provided time to mobilize the reserves, slow any invader, or intercept any attacking aircraft. The Sinai Desert presented to Israel the key ingredient Clausewitz said the defense required -- time. But the role the canal played in the war, on both sides, is peculiar if examined through Clausewitz's ruminations.

Clausewitz considered rivers to be of a limited asset to a defense. Considering the Suez Canal on the average only 180-250 yards wide and from 50 to 60 feet⁽⁷⁹⁾ deep the parallel can most certainly be drawn towards a river. About rivers he said:

...their peculiar characteristic is that they act like a tool made of a hard and brittle substance: they either stand the heaviest blow undented, or their defensive capacity falls to pieces and then ceases completely.

He goes on to add that historical examples of the successful defense of rivers are rare.⁽⁸⁰⁾ In his Commentary in On War Brodie specifically addresses the Israeli position of even considering the Suez Canal as a meaningful barrier against the crossing of Egyptian troops and wonders how they reached their opinion.⁽⁸¹⁾ The Israelis did consider the Suez Canal along with the Bar-Lev Line as a major obstacle to an Egyptian advance.⁽⁸²⁾ However, considering its narrow width and the limited capabilities of the fortifications it should have been considered a mere aid to observation or trip-wire to an early warning system.⁽⁸³⁾

The Egyptian utilization of the canal in their operational plans also suffers under Clausewitzian scrutiny. Brodie points out that:

...an advancing army is disadvantaged from having a wide river in its rear, for its lines of communications and of retreat may be limited to one or a few crossing points. (24)

In Book Five, Chapter Six while discussing the disposition of the army Clausewitz mentions considerations which should be made concerning the existence and security of an army. (25) Four of those considerations were: 1) Ease of supply; 2) Ease of quatering; 3) Security of the rear; and 4) Open ground to its front. These taken individually show the Egyptians: 1) Were ultimately cut-off from their base of supply with the canal to their back; 2) The bridgeheads provided target rich environments for the Israelis once the SAM umbrella was destroyed; 3) Once the armored reserves were moved to the east bank the Egyptian rear proved vulnerable to Israeli attack; 4) The two bridgeheads established by the Egyptians were under observation and artillery fire from the hills five miles inland which overlooked the Suez Canal.

The Israelis made positive use of the terrain by maintaining possession of the hills that overlooked the canal. From the hills they could observe the Egyptian actions and keep their own maneuvers hidden. The Egyptians failed to expand their initial bridgeheads so didn't suffer the problems encountered by the Israelis while maneuvering in Sinai/Suez sands. In most areas travel was limited to the roads or vehicles suffered being stuck in soft, shifting sand or mushy swampland which was in the north.

The key to the conflict concerning the factor of terrain was the ridgelines which offered observation and concealment to the occupier. The Egyptians failed to seize these terrain features and the Israelis made good use of them. (26)

Surprise: The Egyptian attack on Israel was an unqualified success in the use of surprise. The extent of the surprise went beyond the frontiers of Israel to include the complete astonishment of the United States. "The most powerful medium in the art of war" was skillfully employed by a country Israeli leaders almost held in complete contempt. Clausewitz stated a portion of the advantage achieved by employing the factor of surprise would be gained by the attacker. To analyze surprise as it was

utilized in this war an examination of the means, causes, and elements of surprise from the tactical, operational, and strategic levels of war will be conducted. The Egyptians knew that to defeat the Israelis they would have to destroy Israel's three offensive forces: Her air force; her armor forces; and her ability to mobilize her reserves rapidly. The first two Egypt planned to defeat with new tactics, the latter with surprise.

The surprise was to be achieved by an intricate, ingenious, and sophisticated deception plan. To begin the plan, Sadat needed the capability to have complete freedom of action. So, in July of 1972 he expelled the Soviet Union from Egypt. Since Nasser the Soviets had continued to increase their presence in Egypt so to avoid any conflicts with, or restrictions imposed by the Soviets, Sadat removed them from the country. (**) The next step was to adhere strictly to the cease-fire agreement. This was designed to lead Israel to believe tensions were easing--and it worked. Next to lull the Israelis into a false sense of security a number of misinformation broadcasts were conducted. These broadcasts told of poor maintenance and bad equipment, areas which were meant to reinforce Israeli opinions on the poor state of the Egyptian army. (**) Next Egypt began to step up her military exercises and maneuvers behind and on the canal. As the exercises became more frequent the sense of apprehension displayed by the Israelis became less and less. Later Egypt started doing some 'sabre rattling' by creating a war atmosphere on the radio, but they never mobilized the reserves or civil defense. Finally, more troops were brought up to the canal, a situation the Israelis could not fail to see, but that was dismissed by saying Egyptian forces had been on the canal in force since 1969. Approaching October more troops were brought up to the canal; artillery support started moving up; missile sites were being manned and finally minefields were being cleared. The actual offensive was approaching. With the final buildups Israel did get more suspicious. The Soviets offset this with broadcasts claiming that the Egyptians were manning their frontiers for fear of an imminent Israeli attack. One final act was played which appears to have been directed to take Israel's attention from her borders and out into the world. Terrorists held up a train and through negotiations got the President of Austria to shut down a transit center for Jews between Moscow and Vienna. The Israeli government showed great

concern and directed their attention to the world beyond her borders. On October 6th the Egyptians were ready to attack and didn't even inform their unit commanders until hours before the offensive.

The attack kicked off and caught Israel off-guard. How this could occur with the information available makes for an interesting study in conceit, arrogance, and ignorance. The Israelis had noticed the buildups but had also noticed similar buildups in the past which, though predictions of war were made, never materialized. This appeared to be just another buildup. Arrogance entered the picture when no concern was raised as forced ratios on the border increased, but the majority of senior leadership still believed Israeli soldiers could handle the odds. The buffer zone provided by the new territory in '67 also allowed a sense of security to permeate the Israeli mentality. Ignorance came into play by an Israeli leadership which could not understand the Arab mentality which would launch an attack, that could result in massive losses, to achieve only limited objectives. With surprise the Egyptians were able to seize two bridgeheads, overrun most of the Israeli strongpost fortifications, and expand their lodgements before the reserves could be mobilized. The Egyptian operational plan based on surprise had been a success.

To defeat the offensive elements of Israeli air and armor, the Egyptians surprised them again. To defeat Israeli air and cover the bridgeheads, the Egyptians deployed the densest concentration of surface-to-air missiles in the world. The Israeli losses of aircraft in the first few hours were more than they had lost throughout the entire Six Day War in '67. To knock-out the armor, infantry units were placed forward into positions, concealed by terrain, and along routes where the Egyptians had observed the Israeli tanks always maneuvered. Then with saturation levels of anti-tank missiles the units surprised the onrushing tanks which had no infantry support (another observation made by the Egyptians). Of the 360 tanks on the canal the Egyptians claimed to have knocked out 300.

So, as predicted by Clausewitz, the attacker can make good use of surprise. However, he also stated the defender can utilize the factor of surprise with his direction and location of his counterattacks. Unlike the French in 1940 the Israelis adapted to the threat. Air strikes were limited until ground units made surprise raids

freely. Though the bridgeheads were eventually to link up their support systems were to remain near the crossing sites to protect the bridges leaving a 'weak seam' between the two armies. The Israelis eventually identified the seam and launched their counterattack across the canal through it. Due to the distances involved along the canal; the separation of the two Egyptian armies; the length of the Israeli defenses; and therefore the size of the theater involved, the Egyptians achieved none of the advantages of cross-fires associated with a concentric attack. Another advantage identified with a concentric attack is the concentration of power against a single force. The first element of cross-fires must be associated with fire support systems while the second pertains to ground maneuver units. These units achieve the advantage envisioned by Clausewitz from converging on a single force to destroy it. This aim was not accomplished by the Egyptians at the operational level. They did have their units linkup and destroy individual Israeli strongpoints along the canal but not against any Israeli operational reserves in a combined effort between the two Egyptian armies. The basic Egyptian plan had been to cross the canal with two armies of approximately equal strength.⁽³⁰⁾ Later the two armies would proceed along separate lines of advance to gain objectives deeper in the Sinai Desert. This kept the Egyptians from combining the strengths of their two armies and allowed the defending Israelis to attack each of the armies separately from divergent lines eventually isolating them from each other. No convergence of forces to concentrate power was achieved by the Egyptians.

Clausewitz's last advantage of the concentric attack was the ability of the converging forces to surround or cutoff the enemy's lines of retreat. This Clausewitz said would be difficult to do above the tactical level because a defender would have ample time to recognize such a maneuver in the larger areas associated with a theater of operations. Having identified the maneuver, he would utilize his advantage of interior lines to extricate himself. When larger distances are concerned Clausewitz stated that the advantage of interior lines increases. The defender has less distance to maneuver while the attacker's distances increase. Of course, in reality, the point is moot. The Egyptians never came close to capitalizing on the advantage of cutting off the lines of retreat of any substantial Israeli force. On the contrary, it was the

Israeli's who utilized their interior lines to conceal their movements, protect their supplies, and launch their counterattacks against the Egyptian bridgeheads and eventually across the canal.

Finally, Clausewitz mentions:

Once a defense has embraced the principle of movement (admittedly starting later than the attacker, but still in time to burst the numbing bonds of inactivity) the benefit of greater concentration and interior lines becomes a decisive one which is more likely to lead to a victory than a convergent pattern of attack.⁽³¹⁾

The Israelis embraced maneuver immediately and with the security provided by interior lines (a security greatly enhanced by the protection of the Israeli Air Force), a flexibility to adapt their counterattacks to the tactics employed by the Egyptians, and the desire to seize the initiative of counterattacks at every level they were able to limit Egyptian advances and turn the tide in their favor.⁽³²⁾

Strengthening Theater of Operations by Fortresses: The degree of surprise, speed, and strength of Egypt's attack completely overwhelmed the defense fortifications of the Bar-Lev Line. Though the Egyptians considered the line a formidable barrier⁽³³⁾ it did not provide much of an obstacle to their attack and the ease of the crossing would surprise even the most optimistic of operational planners.⁽³⁴⁾ Part of the explanation for the limited opposition provided by the Israeli defense system is due to the controversy which surrounded the actual role of the canal defenses.

One opinion suggested the line should be a formidable barrier with an elaborate system of strong fortifications intended to prevent any penetration of Israeli frontier. Another opinion saw the first as too expansive and suggested a series of fortified strongpoints held by a minimum number of troops. Support would be provided by mobile armor units and artillery firing positions to the rear. This type of defense was meant to slow any enemy advance. It would also provide time for the reserve units to move forward and repel the invaders. Still others believed the canal should only have observation posts to sound an alarm of any incursions made and leave the actual defense to a highly mobile, in-depth deployment of combat units. This recommendation was opposed by those who felt since the ultimate objective of the country would be to counterattack and throw the invaders back -- this option meant Israel

would have to retake the land it once had occupied. It was agreed the first plan was too expensive, so a compromise version of the second recommendation was implemented. Its construction was supervised by the Army's Chief of Staff, Chaim Bar-Lev.

Still, even the compromise recommendation was altered.⁽²²⁾ Due to Sadat's observance of the cease-fire and the continuing pressure to cut military expenditures many of the fortifications were later filled-in or allowed to fall into various stages of disrepair. At the time of the attack actions had been implemented to reactivate some of the fortifications and upgrade some of the line's other facilities but the actions were too little, too late. The Egyptian attacks were launched against blind spots in the fortifications' areas of observation and against those strong-points which did not have mutual support from neighboring facilities. Though some forts provided significant opposition, most were overrun, bypassed or isolated. A total of 436 Israeli soldiers manned the 110 miles of canal shoreline.

As previously mentioned the tactics of the supporting armor maneuver elements had been closely observed and documented by the Egyptians. When the attack began infantry units rushed to the opposite bank to man the top of the sand barriers⁽²³⁾ and fire down on the approaching tanks with anti-tank missiles.

At this point one might wonder if the dispositions of the Bar-Lev Line provided any of the support to the defender as suggested by Clausewitz. The answer is yes! The Bar-Lev Line was not just the strong-points and observation posts constructed on the East Bank of the canal. The two ridgelines which overlooked the canal area also provided defensive positions for the Israeli's. Those ridgelines allowed observation of the Egyptian bridgeheads; artillery posts to fire down on the invader's positions; cover for the movement of maneuver units; and protection for the resupply lines. Those ridgeline positions stopped the Egyptian advance and provided the stepping stones for the ultimate Israeli attacks against their aggressors.

Popular Support: The circumstances under which Clausewitz felt this factor would be applicable were somewhat obscured in this conflict. In Book Six, Chapter Twenty-Six Clausewitz expanded on his discussion presented in Book Six, Chapter Four. He felt that general insurrections,

popular uprisings, universal conscription, priming of the people or employment of the militia were all ingredients running in the same direction viewed from the old, narrower, military system. Though each category had fundamental differences they all were still related to the execution of war. In the Israeli reserves we find the evolutionary creation of Clausewitz's nineteenth century militia. An arming of the people on whose potential value, in Israel's case, is predicated the defense of the nation.^{'87'} The obscured factors or non-pertinent Clausewitzian material must be characterized by his view on the conditions necessary for a general uprising to occur^{'88'} and the non-use of a militia against regular army forces. As the progeny of the militia, Israel's reserves were now trained and utilized to engage the front-line units of her enemies.

Leaving the military arena and entering the political maelstrom the degree of popular support should be discussed. After the '67 war various political factions struggled within the Israeli government to give a direction to the issue of Arab-Israeli relations. Some wanted a bigger military budget, harsher reprisals against terrorist activities, and annexation of all occupied territory into the State of Israel. Others voiced opposition to the growing military budget, sought negotiations with all Arab elements, and pursued a position of returning all occupied lands to the previous owners. The confrontations were often marked by vehement language and occasionally violence. But when the Egyptians and Syrians attacked, the popular support was all for mobilizing the reserves and expelling the invaders from Israel's frontiers.

Though Egyptian popular feeling was in favor of the attack that support was tenuous and a constant source of concern for Sadat and his military leaders. With a history of over twenty years of military failure against the Israelis, Egyptian support for any endeavor which might lead to another bout with national humiliation was questioned by the public. Support of the military was also necessary for any Egyptian political leader to succeed in running the country or in launching an all-out attack against Israel. During the War of Attrition Sadat took steps which strengthened the military, sedated the populace,^{'89'} and provided him with sufficient popular support to launch the attack against Israel.

The basis for popular support within Israel was their desire for the

continued existence of the nation. Egyptian popular support was nurtured on propaganda and government censorship. The factor of popular support was very much in favor of the defender in the 1973 war.

Exploitation of Moral Factors: Though the fortifications positioned on the canal may have done little to prevent the successful initial stages of the Egyptian attack the moral fortitude displayed by the Israeli soldiers in their defenses typified the determination the majority of the Israeli's displayed during the war. Clausewitz stated the moral factor can be used by a commander to inspire his troops, but a better description of the type of moral fiber found in the defense was presented in Book Six, Chapter Five:

Consequently, if we are to conceive of a defense as it should be, it is this. All means are prepared to the utmost; the army is fit for war and familiar with it; the general will let the enemy come on, not from confused indecision and fear, but by his own choice, coolly and deliberately; fortresses are undaunted by the prospect of a siege; and finally a stout-hearted populace is no more afraid of the enemy than he of it.⁽¹⁰⁰⁾

Though certain elements of this statement are in disagreement with the actual situation present in Israel at the time of the attack; the overall tone and confident flavor of the message describes the Israeli Army to a tee. Here was an army, even a country, totally confident in its abilities though surrounded by hostile forces and facing unfavorable numerical odds. The people were sure that regardless of the situation they could take whatever punishment an attacker might inflict, withstand the blows, and ultimately defeat the invading forces.

The invader would be defeated because Commanders at every level were confident that they could aid their country and in return their country would come to his aid. At the lowest level, numerous examples of bravery exist. One story related the exploits of a single tank which held off advancing Egyptian forces for half-an-hour. When the tank was finally overcome it was discovered a single, wounded soldier was responsible for the delay -- the rest of his crew had been killed. At company level, it was noted that not one strong-point surrendered without being given orders. Some held out until the end of the war even though isolated from friendly forces. Part of this was attributed to the knowledge the defenders knew the rest of the Army would not desert them. Though senior leadership had poor examples⁽¹⁰¹⁾ the majority of the senior combat commanders displayed an aggressive attitude, a will to win which they

conveyed to their soldiers, and a desire to be near the front. There they were better able to lead their men and assess the changing face of battle. Their constant will to seize the initiative was a major, compelling factor in the ultimate outcome of the war.

Egyptian morale must also be considered to have been good. In his book, The Crossing of the Suez, Egyptian General Shazly said due to overwhelming success of the initial operation, coupled with the destruction inflicted on Israeli armored and air forces, the morale of the Egyptian soldier was at an all time high. But when the Israelis started inflicting setbacks on the invading forces Egyptian morale became a concern. The Egyptian population was informed of the initial successes but kept in the dark as the gains became tenuous and an army became isolated.

Clausewitz also related moral factors to the alliances, balance of power, and status quo relationships in war. He stated the defender normally received the greater benefit from being invaded because his allies will normally come to his aid to maintain the status quo. The aid received from any set of alliances must be considered of equal value in this instance. Though the aid Egypt received from her Arab neighbors was minimal her association with the Soviet Union was just as supportive logistically as the Israeli alliance with the United States.

When finally evaluating the moral factors in this conflict and specifically the morale of the armies -- the advantage goes to Israel. Her past record of victories, the quality of her training, equipment, soldiers, and leadership gave her army an overwhelming advantage. And a sense of superiority that could not be denied.

Conclusion

This paper's purpose was to take two examples of twentieth century operational warfare, conduct an analytical review of the material, compile the data along predetermined categorical lines and decide whether or not Clausewitz's proposition the defense is the stronger form of war remains valid. The study was the second of two such praxological attempts dealing with this particular Clausewitzian dictum. The first paper examined the issue from a tactical level. Both studies viewed the proposition from Clausewitz's perspective using factors he applied to analyze the subject. Neither attempted to create new theories or advance modern issues to

complete the research. The factors applied by Clausewitz were the ones examined in relation to modern warfare to see if his proposition was still usable and valid.

So is the conclusion the same as at the tactical level, that the defense can still be the stronger form of war at the operational level in modern warfare? The two modern confrontations examined provided as many differences as they did similarities. Though one may question any conclusion which seems so presumptuous as to declare the defense the stronger form of war after examining the German defeat of France at the beginning of World War II, it must be stressed factors were examined, not outcomes. How those factors, which Clausewitz observed produced decisive advantages in war, were utilized and employed was the issue -- not victory or defeat. Though it must be emphasized any instrument which may be employed correctly to receive a favorable outcome also realizes the possibility of misuse and the resultant unfavorable outcome. Of course, effective use of all the factors should accrue significant advantages to the defender and assure his success. The examples studied provided excellent contrasts on how advantageous factors may be successfully employed or criminally disregarded.

The wars in 1940 and 1973 presented amazing similarities between combatants which resulted in contrasting outcomes. Both France and Israel were countries which placed considerable importance on the role of their reserves and their regular armies. Both saw a need to employ the use of extensive systems of fortifications on hostile borders and based their defensive posture on the need to use territory to buffer their populations from the aggression of their invaders. Both were confident in the abilities of their regular armies to stem any invasions so their reserve forces would have ample time to mobilize and deploy. But it was less their similarities than their enemies' characteristics and desired goals which also contributed to the contrasting results.

Germany was a country dominated by an inspirational leader; Egypt had a single leader but one who needed the support of the military and had a precarious hold on the people. Germany created propaganda to promote victories; Egypt promoted propaganda to create victories. The German army was aggressive, confident, and offensive minded; the Egyptian army was aggressive, but tentative and defensive oriented. The German objective

with the invasion was destruction of the Allies; the Egyptian objective was vague (to break diplomatic a log jam) and limited in scope.

Though both France and Israel suffered strategic surprise Israel retaliated with surprise of her own, as emphasized by Clausewitz, with the scope and direction of her counterattacks. France surprised Germany with the lack of intensity of her counterattacks. Israel was able to defend and maintain the significant terrain while France ignored it. Israel utilized the advantages of interior lines and divergent attack to defeat and offset Egyptian advances, while France suffered confusion in her interior lines and made feeble attempts to exploit the advantages of divergent attack. Though the frontline fortifications of Israel were overrun the depth of her defenses (ridgelines), expanse of the Sinai Desert, and response of her reserves offset her attacker's advance. French fortifications performed flawlessly, but unfortunately their effects were undermined by poor operational analysis of the remaining area to be defended. Israel mobilized popular support to combat an invasion; France found her popular support vanish with an invasion. Finally, the morale of the Israeli army was predicated on a history of success and a will to win at all costs. In most cases the morale of the French army dissipated in the face of the German advance. Israeli defenders recovered from surprise and shell shock to man their positions. French defenders, on the whole, saw their resolve crumble by the siren of a Stuka Bomber.

Israel effectively utilized the factors which Clausewitz said would bring advantages to the defender, while France did not. Israel adapted to her threat, France proved unable to adapt and inflexible. The Germans admitted adequate French response to the Ardennes could have destroyed the advance, but French leadership was paralyzed with indecision and failed to recognize the changing face of battle.

Had the French properly, even partially, implemented the factors presented by Clausewitz the results of 1940 may have been significantly different. Is there any question on the amount of damage the French could have inflicted on the canalized German Forces had the defenses at Sedan been better prepared, the terrain effectively used, and reinforcements sent to accomplish surprise counterattacks? Doubtless, heavy losses inflicted on the Germans would have improved the morale of the French troops. The factors identified by Clausewitz were present -- The French

did not use them. So the superiority of the defense was not tested -- because sound defensive measures were not employed. Had they been, along with the Arab-Israeli War, the defense probably would have proven itself stronger. So, as at the tactical level, the defense can still be the stronger form of war at the operational in th 20th Century if those factors identified by Clausewitz are utilized properly.

Finally, though Clausewitz's proposition remains valid it should continue to be questioned, perhaps given additional factors, and revised as deemed necessary. It was Clausewitz who continually stressed the character of war denied quantification; resisted the use of formulas; was situationally dependent; and changed by becoming a product of its environment. Though he insisted the defense was inherently stronger he also recognized advantages of war tend to ebb and flow. The study of the two conflicts provided an opportunity to observe examples of modern warfare in relation to Clausewitzian theory, but a statement from Clausewitz's perspective sums up this analytical excursion:

Apt examples are the best teachers, but one must never let a cloud of preconceived ideas get in the way; for even the rays of the sun are refracted and diffused by clouds. It is the theorist's most urgent task to dissipate such preconception which at times form and infiltrate like a miasma. The errors intellect creates, intellect can again destroy. (102)

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ENDNOTES

1. This is the second monograph by the same author dealing with Clausewitz's proposition. The first dealt with the subject from the tactical level examining the Battles of the Somme in WWI and of Kursk in WWII.
2. Aron, Raymond. Clausewitz Philosopher of War p. 89.
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4. Ibid.
5. Aron. Clausewitz, p.5.
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7. Ibid., p.679.
8. Ibid., p. 680.
9. Paret, Peter. Clausewitz and the State, p.356.
10. Clausewitz, On War. p.370.
11. Ibid.
12. Ibid., p.358.
13. Ibid., p.524.
14. Ibid., p.370.
15. Conversation with James Snyder, Instructor School of Advanced Military Studies, CGSC, Ft. Leavenworth.
16. Ibid., p.360.
17. Ibid., p.363.
18. Ibid., p.364.
19. Handel, Michael, Clausewitz and Modern Strategy, p.69.
20. Ibid., p.361.
21. Ibid.
22. Ibid., p.365.

23. Ibid.,
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26. Ibid.
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28. Brodie, On War, p.691
29. Clausewitz, On War, p.479
30. Ibid., p.366.
31. Ibid., p.128
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33. Clausewitz, On War, p.379
34. Ibid., p.358
35. FM 101-5-1. Operational Terms and Symbols (21 October 1985), p.1-52.
36. Schneider, James J., Theoretical Paper No. 3, p.10-12
37. Doughty, Robert A., The Seeds of Disaster, p.3.
38. Ibid., p.9.
39. The Tweeners Years. The years between WWI and WWII the French wavered between the policies of one or two-year conscriptions. Shortly after WWI they adopted the one-year conscription. This was based on public opinion which was reacting to the extensive losses suffered in WWI. However, the Government was almost forced by circumstances to later return the two-year conscription policy. The military pointed out that training and proficiency of the entire military suffered from the shorter period of obligation.
40. Doughty, Seeds of Disaster, p.,24.
41. Doughty stated despite the size of the French Army in the late 30's "...it could effectively fight a war against a major power only after calling the nation to arms, and it could not fight a limited war without placing in risk it's entire mobilization system and it's capability to fight a total war." So though France strongly objected to German's moves in the Rhineland, Austria, Czechoslovakia, and Poland it did not have capability within its basic structure to respond to the level of the threat.

42. Construction on the Maginot Line began in 1930 and at various levels and locations continued up until the war.
43. Doughty, Seeds of Disaster, p.41.
44. Ibid., p.58.
45. Horne, Alistair. To Lose a Battle: France 1940, p.45.
46. The Belgians probably made worse use of their terrain and the building of obstructions than the French. When the French were finally allowed to cross the border and march to pre-planned positions they were surprised to find the Belgians had built few defensive positions for the French to occupy.
47. Horne, Alistair. To Lose a Battle: France 1940, p.330.
48. Ibid., p. 324.
49. Originally the plan was for Germans to go through the Allied Forces in the north. When parts of the plan were compromised during the Mechelen Incident, the plan was changed. In response to the circumstances surrounding the incident France began movement of her forces to wartime positions. Germany noted the French movements and took advantage of the knowledge while implementing Plan Yellow.
50. Horne, To Lose a Battle, p. 247.
51. Ibid., p.246.
52. Ibid., p.247.
53. Ibid., p.197.
54. Ibid
55. Ibid., p.247.
56. Doughty, Seeds of Disaster, p.4.
57. Ibid.
58. Horne, To Lose a Battle, p. 319.
59. Ibid., p.327.
60. Doughty, Seeds of Disaster, p.27.
61. Ibid., p.67.
62. Dupuy, T.N., A Genius for War, p. 264.
63. Doughty, Seeds of Disaster, p.70.

64. Ibid., p.71.

65. Ibid.

66. Later, of course, France offered glorious examples of armed resistance to the occupying Germans in the form of the French Resistance. This materialization of popular support very closely parallels the very examples that Clausewitz witnessed in Spain during the Napoleonic period.

67. Doughty, Seeds of Disaster, p.14.

68. Ibid.

69. Ibid., p.16.

70. Hitler was so popular and with his unorthodox, yet, successful sojourns into Germany's neighbor countries, that the military leadership which was seriously considering removing him from power was forced to merely follow his satanic endeavors.

71. Doughty, Seeds of Disaster, p.3.

72. Ibid., p.185.

73. Horne, To Lose A Battle, p. 205.

74. Doughty, Seeds of Disaster, p.185.

75. Horne, To Lose A Battle, p. 346.

76. Ibid., p.351.

77. Ibid., p.232

78. Shazly, Saad El. The Crossing of the Suez, p.7.

79. Herzog, Chaim. The Arab-Israeli Wars, p.252.

80. Clausewitz, On War, p.422.

81. Brodie, On War, p.685.

82. Brodie brings up an excellent point about having a river or any water obstacle play a considerable role in the defense. He reminds us there is no record of a river providing a significant barrier to any invading force during WWII. As a matter of fact having to defend the entire length of the English Channel meant the Germans had to spread out their forces and didn't have sufficient strength to throw the Allies out on D-Day. The Israeli's would later draw the same conclusion about their forces deployed along the Bar-Lev Line.

83. Herzog, Arab-Israeli War, p.217.

84. Brodie, On War, p.685.

85. Sadat's military objectives were limited for this war. They were simply to break the 'log-jam' in the Sinai where no headway had been made in retrieving the territory lost in the '67 war. He felt that could be accomplished by dealing the Israelis a limited defeat by seizing control of the Suez Canal and continuing inland up to 100 kms to control the key passes from the Sinai into the Suez. The military operation had three phases. Phase One was to cross the canal and establish two bridgeheads. Phase Two called for widening the bridgeheads, strengthening the positions, and inflicting heavy losses on the Israelis as they counterattacked. And Phase Three the expansion of the invasion out to 100 kms into the Sinai.

86. From the canal the terrain gradually rose in height over rolling hills until a ridgeline 10-12 kms inland. Behind that ridgeline was artillery road for the movement of reinforcements, artillery, and supplies. Behind that road the terrain rose again to a second ridgeline 30 kms behind the first ridgeline. Lateral Road wound it's way behind that ridgeline which in turn was backed by 70 kms of impenetrable sand dunes.

87. Herzog, Arab-Israeli Wars, p.242.

88. Ibid. p.249.

89. The second phase of the Egyptian operation was for the initial bridgeheads to be expanded and immediately placed in reinforced defensive positions. Immediately after their attack the Egyptians fully expected the Israelis to mount counterattacks, so their bridgehead positions were suppose to dig in and prepare for the Israeli surges. They planned to attrit the Israelis as they tried to push them off the east bank of the Suez Canal. Israeli counterattacks changed their character as the war continued. The Egyptians were quite correct in predicting the initial counterattacks would be launched against their positions in a head first drive to seize the initiative. The Egyptians had observed the Israeli's and counted on that very response against which they concentrated all their combined arms in an attempt to level heavy attrition against the Israeli forces. But as the losses mounted and the situation cleared as the surprise wore off the Israeli counterattacks adapted to the threat and sought out Egyptian vulnerabilities. One was having a water barrier at their back.

90. To confuse the Israeli higher command levels the Egyptians planned for a two axis attack. They felt, and correctly so, the Israeli counterattacks would be delayed while they attempted to determine the main Egyptian effort. This delay gave the Egyptians additional time to prepare their bridgeheads.

91. Clausewitz, On War, p.368.

92. The Israelis of course only had the benefit of interior lines, once again protected substantially by their air force, during the initial

phases of the conflict. Once assaults were made across the canal the Israelis were operating on exterior lines. But the goal to cut Egyptian LOCs and isolate units paid high dividends. And in reality was the 'flashing sword of vengeance' of the original defense in action.

93. Shazly, Crossing the Suez, p.8.

94. Egyptian losses were five aircraft, 20 tanks, and 280 killed - 2.5 percent of the aircraft deployed, two percent of the tanks, and 0.3 percent of the combat troops. In 18 hours they had put 90,000 men, 850 tanks, and 11,000 vehicles across the canal.

95. Herzog, Arab-Israeli Wars, p.240.

96. On each side of the canal the opponents built large sand embankments which were meant to act as barriers against any attack and provided higher platforms for the observation of the other side of the canal. The Israeli ramp was 75 feet high. The Egyptian ramp had been raised to 130 feet, thus blocking Israeli view of Egyptian territory while enhancing Egyptian observation of Israeli defensive positions.

97. Clausewitz, On War, p.479.

98. Ibid., p.480

99. During the War of Attrition both Nasser and Sadat found that public support could be built by launching small but successful raids against Israeli targets. Though the Israelis always gave a significantly larger response, the success of the Egyptian mission usually provided a source of pride and the Israeli responses only tended to mobilize public opinion further against Israel.

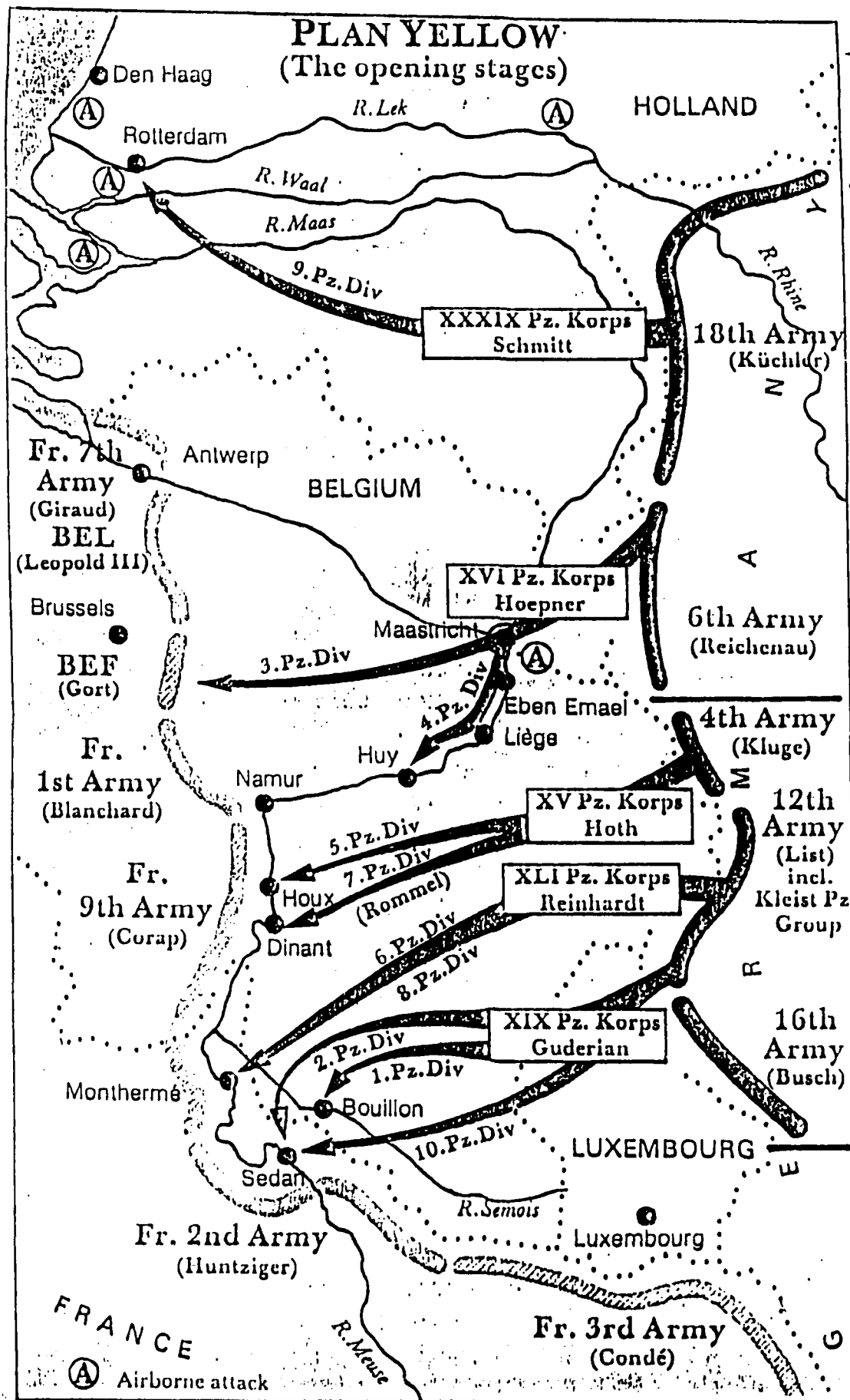
100. Clausewitz, On War, p.375.

101. Defense Minister Moshe Dayan and Major General Goronish Gonen, Commander of the Southern Command, both had swings of optimism and depression of the status of the war which confused their staffs and resulted in confusing orders and directives.

102. The issue of Clausewitz pertinence in modern warfare has been addressed in numerous articles (see Bibliography) so other than addressing the value of his offense/defense proposition was not addressed here. The criticism his work did not take into account the issues of economics, navies, and technology's affects on the battlefield were discussed in the first monograph dealing with the tactical level. In this study's examples it was not technology which played the critical role but how it's instruments were doctrinally integrated into the military. The Stuka Bomber was not the best aircraft of the day and the French tanks were generally considered superior to the German tanks. But their combined affect was devastating. The SAM's used by the Egyptians were not exactly new developments unknown to the Israeli's but their deployment in mass was. Technology, though not the focus for this study, is not considered to have had an effect which inherently favored the offense or the defense in 1940 or 1973.

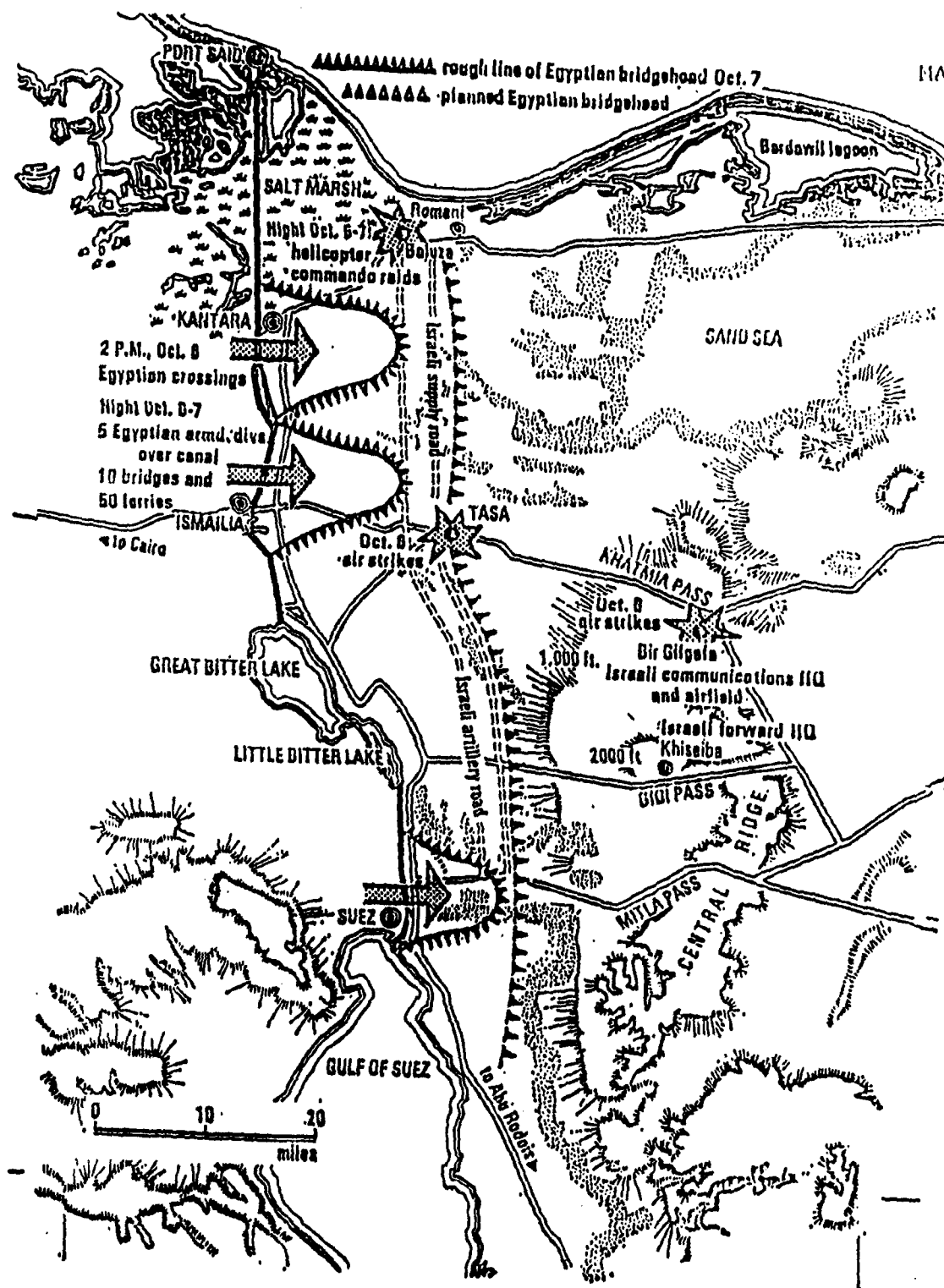
103. Clausewitz, On War, p.262.

APPENDEXES



MAP #1

Source: Blitzkrieg by Len Deighton.



Source: The Yom Kippur War
by
the Insight Team of the London Sunday Times.

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